

June-16-14 1:13:50 PM

Page 1

## Quality Control

~~DAS~~

46

9-89

14/08/01

**DAS**

46

9-85

17/08/01

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other  _____ _____ _____
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# Work Order ID 120941

June-16-14 1:13:50 PM

**\*120941\***

Page 2

Item ID: 647.4114 Accept **\*N900040100\*** Setup Start **\*NS1\***  
Revision ID: Stop **\*NS2\***  
Item Name: Shim  
Start Date: 6/23/14 Start Qty: 32.00 **\*32\*** Cust Item ID:  
Required Date: 6/23/14 Req'd Qty: 32.00 **\*32\*** Customer:  
Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 <b>*130*</b> QC Quality Control	QC8- Inspect parts - second check  Memo	0.00 0.00		DAS 38 9-89 14/08/01		(32)			
140 <b>*140*</b> Outsource4 Outsource process - Anodize	Outsource process-Anodize per QSI017 4.1.10.1  Memo Issue P/O to ATC <b>PO 25298</b>  1- Black Anodize as per Dwg 647.4100  2- PRIME AS PER DWG, SEE NOTE #2  Certification of Comformity is required	0.00 0.00							
150 <b>*150*</b> Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs  Memo	0.00 0.00							

*Handwritten notes:*  
14/08/05  
32x 50 14-8-20  
Pto →

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design <input type="checkbox"/>									
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Handling/Pre <input type="checkbox"/>									
Material <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Offset/Setup <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Transport <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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## Supplier Non-Conformance Report

<b>Reviewed</b>
<b>DQA:</b>
<b>Date:</b>

Printed on: Thursday, August 21, 2014

<b>Details</b>			
<b>Raised Date</b> 8/21/2014	<b>Status</b> Open	<b>Owner</b> Gregoire, Michael	<b>Number</b> NCR14-4139
<b>Target Date</b> 8/29/2014	<b>Standard</b>	<b>Severity</b> MAJOR	
<b>Process</b> Inspection		<b>Audit</b>	
<b>Raised By Person</b> Downing, Eric M	<b>Raised Against (Department or Supplier)</b> A.T.G. Industries Inc	<b>Fault Category</b> General/Finish	
<b>Details</b> found when inspecting 647.4114 shims on w/o120941 that qty x3 that the primer is very messy, has a poor finish and has some runs on it. see attached pictures			
<b>Keywords</b> poor finish		<b>Product</b> 647.4114	
<b>Document</b>		<b>Root Cause</b>	
<b>Closed By</b>	<b>Closed Date</b>	<b>Resolution</b>	

<b>Corrective Action</b>			
<b>Target Date</b> 8/29/2014	<b>Owner</b> Downing, Eric M	<b>Closed Date</b>	<b>Closed By</b>
<b>Details</b>			

<b>Actions</b>			
<b>Number</b>	<b>Owner</b>	<b>Target Date</b>	<b>Completed Date</b>
<b>Details</b>		<b>Response</b>	
1	Gregoire, Michael	8/28/2014	
Contact Supplier and obtain corrective action			
2	Murdoch, Matthew	8/25/2014	
strip primer here at Dart Aero Hawkesbury and re prime as per QSI005 & dwg		CA 14.08-22	

<b>Target Date</b> 8/29/2014	<b>Owner</b> Downing, Eric M	<b>Closed Date</b>	<b>Closed By</b>
<b>Details</b>			

<b>Number</b>	<b>Owner</b>	<b>Target Date</b>	<b>Completed Date</b>
<b>Details</b>		<b>Response</b>	

# Work Order ID 120941

\*120941\*

Page 3

June-16-14 1:13:50 PM

Item ID: 647.4114

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Shim

Start Date: 6/23/14

Start Qty: 32.00

\*32\*

Cust Item ID:

Required Date: 6/23/14

Req'd Qty: 32.00

\*32\*

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

\*NR1\*

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

\*160\*

QC

Quality Control

QC- Inspect part completeness to step on W/O  
QC6

Memo

0.00

0.00

32

DAS

38

9-89

14-8-29

190

\*190\*

Packaging

Packaging

Identify as per dwg & Stock Location:

CC 1108

Memo

\*\*\*IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV\*\*\*

0.00

0.00

32

14/8/2

DAS

32

9-89

200

\*200\*

QC

Quality Control

QC21- Final Inspection - Work Order Release

Memo

0.00

0.00

MLJ

14-09-03

MLJ 14-08-03

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>		<b>AGAINST DEPARTMENT/PROCESS</b>  <div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/>            Machining <input type="checkbox"/>            Thermoforming <input type="checkbox"/>            Large Fab <input type="checkbox"/> </div> <div>           Crosstube <input type="checkbox"/>            Small Fab <input type="checkbox"/>            Finishing <input type="checkbox"/>            Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/>            Prod. Eng. Coord. <input type="checkbox"/>            Rec/Store/Packaging <input type="checkbox"/>            Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/>            Quality <input type="checkbox"/>            Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Design											
Doc/Data											
Equip/Tooling											
Handling/Pre											
Material											
Operator											
Offset/Setup											
Process											
Supplier											
Training											
Transport											
Unapproved											

FAULT CATEGORY				
<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	



# Picklist Print

June-16-14 1:13:50 PM

Page 1

Work Order ID: 120941

\*120941\*

Parent Item: 647.4114

\*647 4114\*

Parent Item Name: Shim

Start Date: 6/23/14

Required Date: 6/23/14

Start Qty: 32.00

Required Qty: 32.00

Comments: IPP REV:A 12.10.26 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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M2024T3S.063

Purchased

No

110

sf

189.1339

0.0328

2

\*M2024T3S 063\*

\*\*

DAS

46

14/08/01

2024-T3 .063 sheet

9-89

Location

Loc Qty

Loc Code

MAT022

189.1339

123701

16.1039

m127866

63.93

m128354

109.1

1.6

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
Equip/Tooling									
Handling/Pre									
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**APICAL**  
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NL 04510

SHEET 1 OF 1

DWG NO. 647.4100

REV: N/C

PREPARED  
BY:

J. BECKER

DATE: 04/24/14

EFFECT ON DWG  
☐ INC. ☒ UNINC.

DWG TITLE: SHEETMETAL

APPROVED BY:

ENGR

MFG

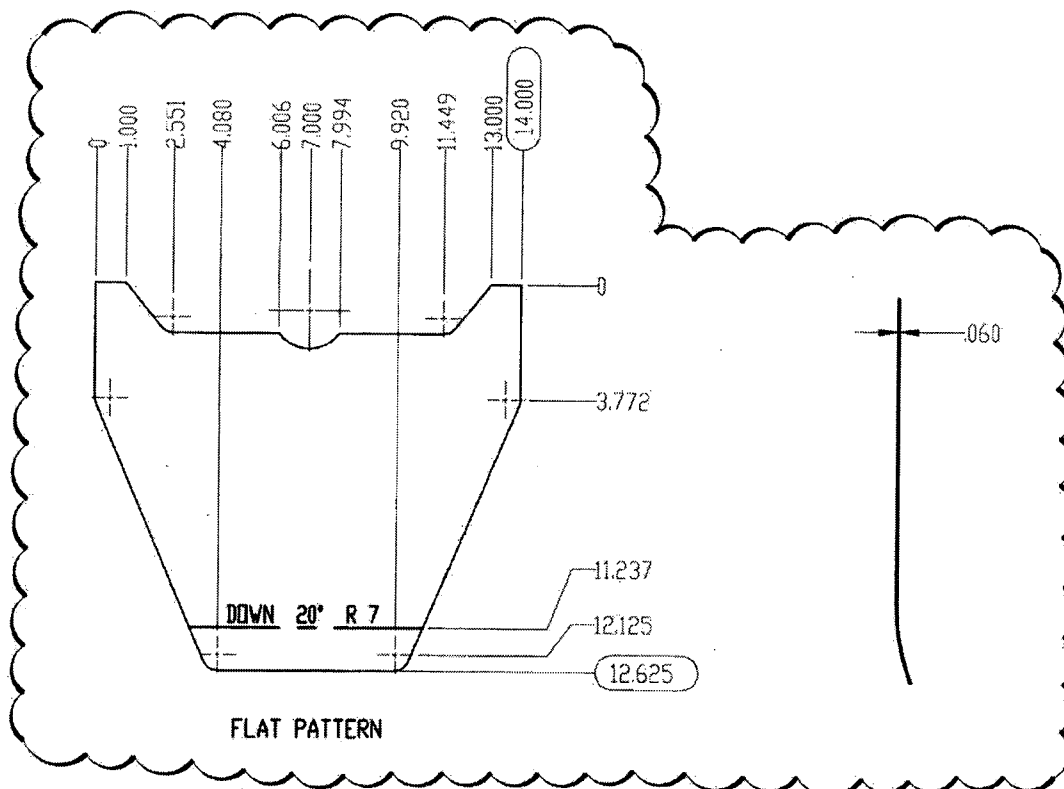
QC

EFF:

NEXT ORDER

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

REASON: MODIFIED DOUBLER.



SHEET 1, ZONE C2 IS:

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 120941 MJS  
14-06-16

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM

CHANGE CATEGORY  
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED  
☐ YES ☒ NO

APICAL  
INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 02866

SHEET 1 OF 1

DWG NO. 647.4100

REV: N/C

PREPARED  
BY

R. ROSANO

DATE: 05/05/10

EFFECT ON DWG  
☐ INC. ☒ UNINC.

DWG TITLE: SHEET METAL

APPROVED BY:

ENGR

MFG

QC

EFF:

CURRENT ORDER

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

REASON: CHANGED PRETREATMENT CALLOUT

SHEET 1, ZONE A1 IS:

NOTES: UNLESS OTHERWISE SPECIFIED

1. MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4

2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE II,  
CLASS 2, COLOR BLACK  
PRETREAT PR-148 ADHESION PROMOTER  
PRIME IAW MIL-P-23377J TYPE I CLASS N

IS

3. DEBURR AND BREAK ALL SHARP EDGES

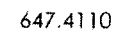
4. IDENTIFY IAW MPP-120

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRU <input type="checkbox"/> ICA <input type="checkbox"/> BOM	CHANGE CATEGORY <input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	DER REVIEW REQUIRED <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

NOTES: UNLESS OTHERWISE SPECIFIED


2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE II,  
CLASS 2, COLOR BLACK;  
CARDINAL 4860-50 PRETREATMENT PRIMER  
PRIME IAW MIL-P-23377J TYPE I CLASS N

4. IDENTIFY IAW MPP-120



02866, 04510

			647.4116	SHIM	△	△
			647.4115	SHIM	△	△
			647.4114	SHIM	△	△
			647.4113	CLIP	△	△
			647.4112	CLIP	△	△
			647.4111	DOUBLER	△	△
			647.4110	DOUBLER	△	△
	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.	
QTY			PARTS LIST			
NEXT ASSY (S)			APPLIED INDUSTRIES			
647.5700				2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 [760]724-5300		
			SHEETMETAL			
			SIZE CAGE CODE QNSD NO		REV N/C	
			B 07A26		647.4100	
			SCALE: NONE		SHEET 1 OF 5	



647.4111

Technical drawing of a mechanical part, likely a bracket or flange, showing dimensions and labels. The drawing is oriented horizontally with a vertical centerline.

**Dimensions:**

- Overall width: 7.250
- Overall height: 2.875
- Top horizontal distance from left edge to centerline: 3.625 (labeled as 7.250 / 2)
- Top horizontal distance from centerline to right edge: 3.625 (labeled as 7.250 / 2)
- Top horizontal distance from left edge to first vertical hole: 0.250
- Top horizontal distance between vertical holes: 0.250
- Top horizontal distance from centerline to first vertical hole: 1.031
- Top horizontal distance from centerline to second vertical hole: 1.375
- Top horizontal distance from centerline to third vertical hole: 1.719
- Top horizontal distance from centerline to fourth vertical hole: 1.800
- Top horizontal distance from centerline to fifth vertical hole: 2.281
- Top horizontal distance from centerline to sixth vertical hole: 2.625
- Top horizontal distance from centerline to seventh vertical hole: 2.969
- Top horizontal distance from centerline to eighth vertical hole: 3.350
- Top horizontal distance from centerline to ninth vertical hole: 3.625
- Top horizontal distance from centerline to tenth vertical hole: 4.281
- Top horizontal distance from centerline to eleventh vertical hole: 4.625
- Top horizontal distance from centerline to twelfth vertical hole: 4.875
- Top horizontal distance from centerline to thirteenth vertical hole: 4.900
- Top horizontal distance from centerline to fourteenth vertical hole: 4.969
- Top horizontal distance from centerline to fifteenth vertical hole: 5.534
- Top horizontal distance from centerline to sixteenth vertical hole: 5.875
- Top horizontal distance from centerline to seventeenth vertical hole: 6.219
- Top horizontal distance from centerline to eighteenth vertical hole: 6.450

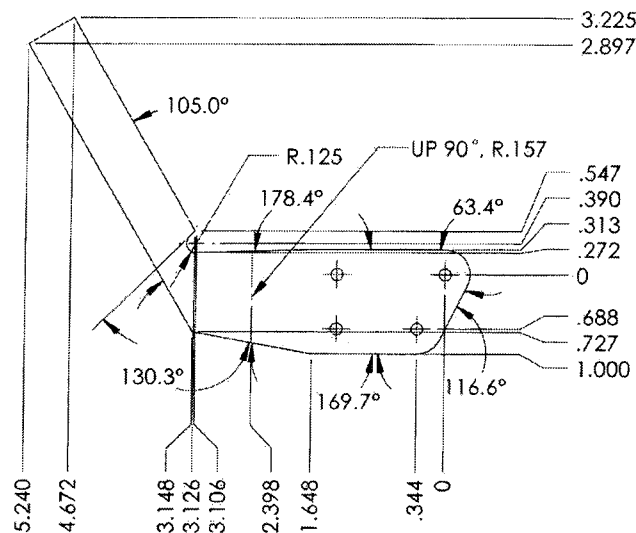
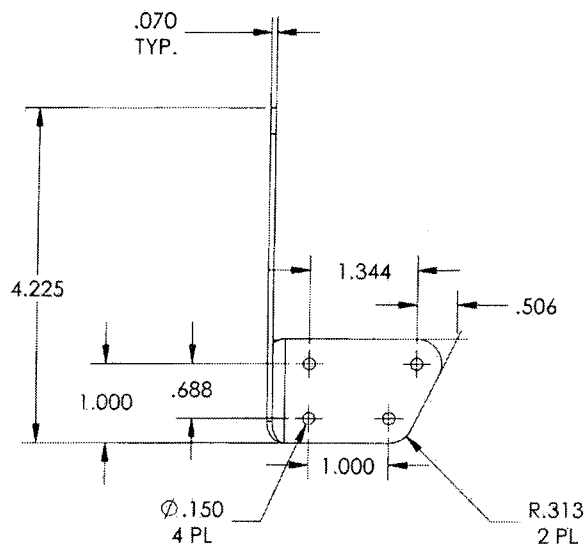
**Labels:**

- R.250 2 PL (Top left corner radius)
- R.438 (Top center radius)
- ( 1.250 ) (Top center hole diameter)
- R.250 (Top right corner radius)
- R.500 2 PL (Top right corner radius)
- Ø.094 17 PL (Top right hole diameter)
- Ø.052 12 PL (Top center hole diameter)

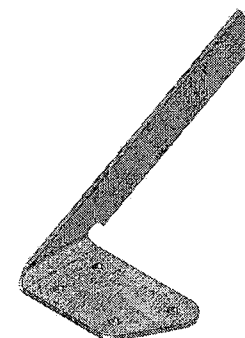
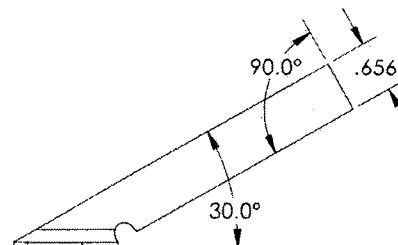
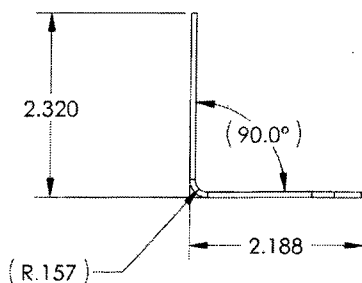
ORIGINAL DATE 1/26/2009	DATE OF 02/25/09	<h1>APICAL INDUSTRIES</h1> <p>2609 TEMPLE HEIGHTS DR. OCEANSIDE, CA 92056-3512 (760)724-5300</p>
DESIGNER R. KOSOVIC	ENGINEER R. KOSOVIC	
CHECKED BY R. KOSOVIC	DATE 02/25/09	
DRAWING APPROVAL R. KOSOVIC	DATE 02/25/09	
CONTRACT NO.		
UNITED STATES OF AMERICA DIVISION OF LABOR RELATIONS LABOR-EMPLOYMENT 1001 MARKET STREET, S.F. SAN FRANCISCO, CALIF. 94102 TELEPHONE (415) 774-2971 TELETYPE (415) 774-2971		<h2>SHEETMETAL</h2>
FREE (PAGE CODE) 0013 SCALE: NONE		DWG. NO. 647.4100 SHEET 2 OF 6

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REV.	DESCRIPTION	DATE	APPROVED



FLAT PATTERN



647.4113 SHOWN  
647.4112 OPPOSITE

ORIGINAL DATE: 01/01/00 DRAWN BY: J. HENDERSON CHECKED BY: J. HENDERSON DESIGNED BY: J. HENDERSON APPROVED BY: J. HENDERSON CONTRACT NO.: 647.4100			
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300			
SHEETMETAL			
REV. 8	CAGE CODE 07M26	DWG. NO. 647.4100	REV. N/C
SCALE: NONE		SHEET 3 OF 6	



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THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

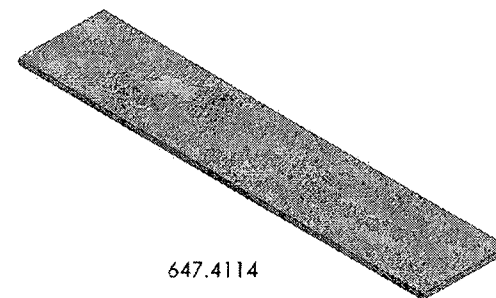
.063



4.80

.984

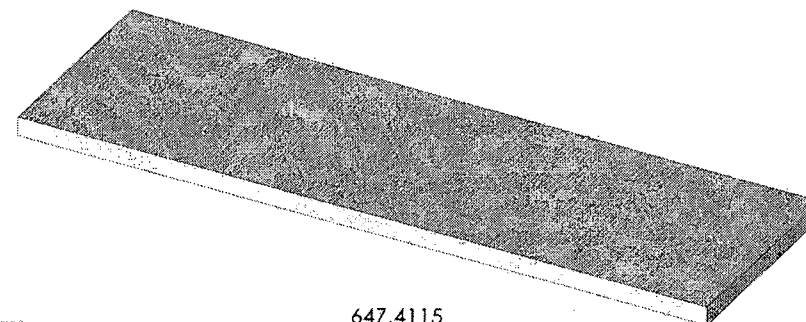
647.4114



ORIGINAL DATE: DATE: 10/1/81 DRAWN BY: J. B. BAKER CHECKED BY: J. B. BAKER DESIGNED BY: J. B. BAKER APPROVED BY: J. B. BAKER CONTRACT NO.:		<b>APICAL INDUSTRIES</b> 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
SHEETMETAL		SHEET 4 OF 6	
SIZE: B CAGE CODE: 07M26 SCALE: NONE	DWO. NO.: 647.4100	REV.: NJC	SHEET 4 OF 6

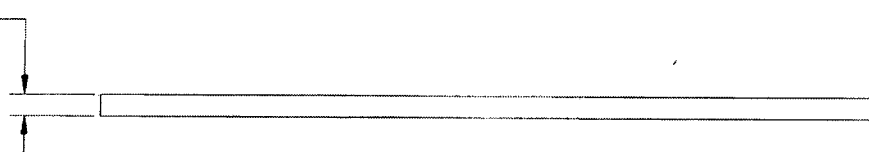
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REV	DESCRIPTION	DATE	APPROVED

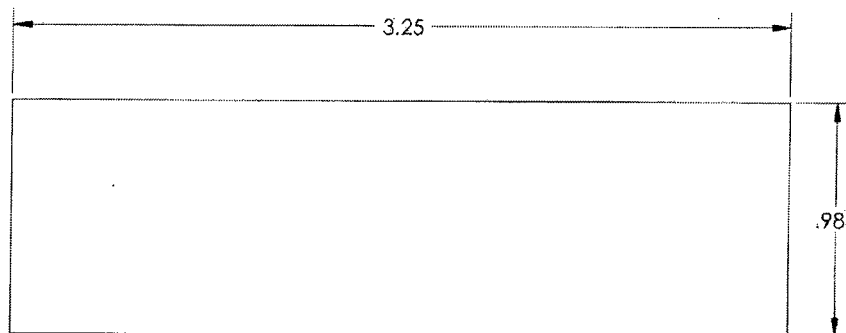


647.4115

.090



3.25

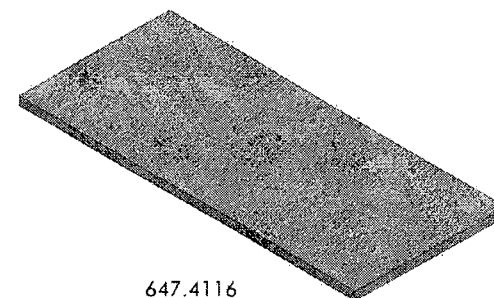
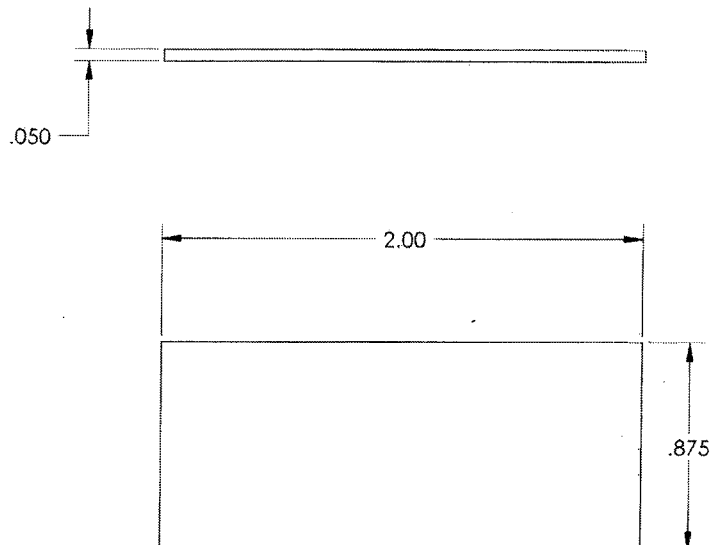


.984

ORIGINAL DATE		APICAL INDUSTRIES	
DESIGNED BY	DATE	2608 TEMPLE HEIGHTS DR.	
DRAWN BY	DATE	OCEANSIDE, CA. 92056-3512 (760) 724-5300	
BY	DATE	SHEETMETAL	
DRAWING APPROVAL		SHEET 5 OF 6	
BY		SCALE NONE	
DATE		SHEET 5 OF 6	

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KEY/NOTES			
REV.	DESCRIPTION	DATE	APPROVED



647.4116

ORIGINAL DATE REVISIONS BY: P. POGGIO DATE: 10/24/00 DRAWING APPROVAL BY: P. POGGIO DATE: 10/24/00 CONTRACT NO.		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .001 ANGLES ± .5°		SHEETMETAL	
SHEET	3	DATE CODE	07/02/06
CHRG. NO.	647.4100	REV.	N/C
SCALE: NONE		SHEET 6 OF 6	



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

\*\*\*PO REPRINT\*\*\*

Purchase Order ID PO25295

Purchase Order Date 8/5/2014

PO Print Date 8/18/2014

Page Number 1 of 1

Order From :

VC-ATG001

Ship To :

DART AEROSPACE LTD

A.T.G. INDUSTRIES INC.  
731 INDUSTRIELLE ROAD  
ROCKLAND, ON K4K 1T2  
CANADA

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

Contact Name

Vendor Phone 613-446-4544

Buyer

Customer POID

Customer Tax # 10127-2607

Ship To Contact

Terms Net 30

Ship To Phone

Currency CAD

Ship Via

VENDOR'S TRUCK

FOB

FCA - (Free Carrier)

Ship Acct

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req. Qty/ Unit of Measure	PO Unit Price	Extended Price
1	120949	647.4115	8/12/2014 No 8/12/2014		32.00	\$0.00	\$0.00
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE II, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N							
Line Total:							\$0.00
2	120941	647.4114	8/12/2014 No 8/12/2014		32.00 ✓	\$0.00	\$0.00
FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE II, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE I CLASS N							
Line Total:							\$0.00
PO Total:							\$0.00

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Change Nbr:

2

Change Date:

8/5/2014



A.T.G. Industries Inc.  
731, rue Industrielle Rd.  
PLATING DEPARTMENT  
Rockland, On K4K 1T2  
Canada  
Ph: (613) 446-4544  
Fax: (613) 446-4556

### Pack List

Number: 63207

Date: 15-Aug-14

To

DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ship To


DART AEROSPACE LTD  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description	Rev:	Line:
32 ea	Part: 647.4115 HARD ANODIZE AS PER MIL-A-8625 TY II, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140491		PO: PO025295
32 ea	Part: 647.4114 HARD ANODIZE AS PER MIL-A-8625 TY II, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20140492		PO: PO025295
<p>Certificate of Conformance</p> <p>A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.</p> <p>ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY</p> <p>DATE : 15/8</p> <p>CERTIFIED SIGNATURE : </p> <p>RECEIVER SIGNATURE : _____</p>			